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In a communication system, a method for media access control feedback over a packet channel divided in channel time slots comprising the steps of:

dividing the channel time slots into sub-channel time slots;

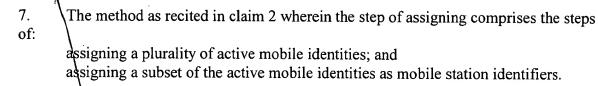
defining a packet channel feedback field associated with each sub-channel time slot; and

indicating acknowledgments using the packet channel feedback field.

- 2. The method as recited in claim 1 comprising the step of:
 assigning an active mobile identity associated with an active mobile station, and
 wherein the step of indicating acknowledgments comprises the step of:
 including the active mobile identity in the packet channel feedback field.
- 15 3. The method as recited in claim 2 wherein the assigned active mobile identity is used to identify an active mobile station to receive packet data signals.
 - 4. The method as recited in claim 2 comprising the step of: invalidating the active mobile identity after one transaction of packet data signals.
 - 5. The method as recited in claim 2 wherein the step of assigning an active mobile identity comprises the step of:

assigning the active mobile identity during a transaction initiation procedure in the system.

- 6. The method as recited in claim 2 wherein the step of assigning comprises the step of:
- assigning a plurality of active mobile identities and ones of the active mobile identity are reserved for special functions.



- 8. The method as recited in claim 2 wherein the assigned active mobile identity is used to indicate a time slot assignment for the active mobile station.
- 9. The method as recited in claim 8 comprising the step of:
 transmitting packet data signals on an uplink over the packet channel based on the time slot assignments.
- 10. The method as recited in claim 8 wherein the step of transmitting comprises the steps of:

forming a sub-channel feedback field in the packet channel feedback field to indicate acknowledgments; and

forming a sub-channel assignment field in the packet channel feedback field to indicate time slot assignments, the sub-channel assignment field being substantially independent of the sub-channel feedback field.

- 11. The method as recited in claim 10 wherein a format of the sub-channel feedback field depends on whether it is in response to a contention access or a reserved access.
- 12. The method as recited in claim 10 wherein the sub-channel feedback field comprises an active mobile identity that indicates acknowledgment in response to a contention access.
 - 13. The method as recited in claim 10 wherein the step of assigning comprises the steps of:
- assigning a plurality of active mobile identities; and reserving a set of the active mobile identities for special functions.

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14. The method as recited in claim 10 wherein the step of assigning comprises the steps of:

assigning a plurality of active mobile identities; and

using a subset of values for the active mobile identities as mobile station identifiers.

- 15. The method as recited in claim 10 wherein the sub-channel feedback field contains flags indicating acknowledgment and continued reservation on the sub-channel.
- 16. The method as recited in claim 10 wherein the step of forming a sub-channel feedback field comprises the step of:

setting the sub-channel feedback field to a special active mobile identity value to indicate a negative acknowledgment.

17. The method as recited in claim 16 wherein the step of forming a sub-channel assignment field comprises the step of:

setting the sub-channel assignment field to a special active mobile identity value to indicate contention.

18. The method as recited in claim 10 wherein the step of forming a sub-channel assignment field comprises the step of:

setting the sub-channel assignment field to an active mobile identity value to indicate time slot assignment.

19. The method as recited in claim 1 wherein the system comprises a mobile station and a base station, and wherein the method comprises the steps of:

transmitting from the mobile station a request to initiate packet data transmissions to the base station based on the packet channel feedback field;

including a suggested active mobile identity value in the request; and awaiting an acknowledgment from the base station in the packet channel feedback field.

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- 20. The method as recited in claim 19 wherein an acknowledgment in the packet channel feedback field indicates acceptance of the suggested active mobile identity.
- The method as recited in claim 19 comprising the step of:

 if a negative acknowledgment is received in the packet channel feedback field,
 waiting a time period before the mobile station makes another request.
 - 22. The method as recited in claim 19 wherein the step of waiting a time period comprises the step of:

waiting for an active mobile identity assignment to the mobile station to be received from the base station.

- A method for transmitting packet data signals in a time slotted packet channel comprising the steps of:

 creating sub-channel time slots associated with the time slotted packet channel; defining an active mobile identity associated with an active mobile station; and identifying acknowledgments using the active mobile identity.
- 20 24. The method as recited in claim 23 further comprising the step of: identifying assignments of sub-channel time slots based on the active mobile identity.
- The method as recited in claim 24 wherein the step of defining comprises the step
 of:
 invalidating the active mobile identity after one transaction of packet data signals.

A communication device for communicating via packet data signals over a packet channel comprising:

a sub-channel controller for identifying acknowledgments and assignments of time slots on the packet channel based on a packet channel feedback field; and

a channel access manager for controlling access to the packet channel based on the acknowledgments and assignments.

The communication device as recited in claim 26 wherein the sub-channel 27. controller identifies acknowledgments based on the packet channel feedback field and a active mobile identity associated with the communication device.

The communication device as recited in claim 27 wherein the device is a mobile 28. station.